AMENDMENTS TO THE CLAIMS

Claims 1-33 (Canceled)

34. (Currently Amended) An in vitro method for detection of disorders characterized by abnormal cell proliferation in an individual comprising:

a. obtaining a biological test sample from an individual;

b. contacting said sample with a probe specific for a transketolase like-1 gene nucleic acid sequence, wherein said probe has a sequence that is at least 80% identical to a part of at least 15 consecutive nucleotides of SEQ ID NO:1 or is complementary or reverse complementary to such a part and wherein said probe hybridizes under stringent conditions to SEQ ID NO: 1 but does not hybridise to an other transketolase or transketolase like sequence;

c. obtaining a normal control sample and contacting said sample with said probe specific for a transketolase like-1 gene nucleic acid sequence;

d. detecting in said biological test sample obtained from said individual the level of polynucleotides that hybridized;

e. detecting in said normal control sample the level of polynucleotides that hybridized;

~~a. detecting in each of a biological test sample obtained from said individual and a normal control sample, a level of polynucleotides that hybridize under stringent conditions to probes specific for of a transketolase like-1 gene, wherein said probes hybridize under stringent conditions to SEQ ID NO: 1; and~~

f. [[b.]] comparing said detected level of hybrized polynucleotides from said biological test sample to the ~~said~~ level of hybridized polynucleotides in the normal control sample[[,]] ; and

g. in the case that ~~wherein~~ a higher level of polynucleotides is detected in said biological test sample as compared to said level of polynucleotides in said normal control sample, diagnosing ~~indicates that~~ said individual as having ~~has~~ at least one disorder ~~of said disorders~~ characterized by abnormal cell proliferation.

35. (Previously Presented) The method according to claim 34, wherein the disorder characterized by abnormal cell proliferation is cancer.

36. (Previously Presented) The method according to claim 35, wherein the cancer is colon cancer, lung cancer, gastric cancer or pancreatic cancer.

37. (Previously Presented) The method according to claim 34, wherein the biological test sample is a body fluid, a secretion, a smear, a biopsy, a liquid containing cells, lysed cells, cell debris, peptides or nucleic acids.

38. (Previously Presented) The method according to claim 37, wherein the biological test sample is serum, urine, semen, stool, bile, a biopsy or a cell- or tissue-sample.

39. (Withdrawn) The method according to claim 34, wherein the detection of the expression of the human transketolase like-1 gene is carried out on a polypeptide level.

40. (Canceled)

41. (Withdrawn) The method according to claim 39, wherein the detection on the polypeptide level is carried out using a binding agent directed against human transketolase like-1 polypeptides.

42. (Withdrawn) The method of claim 41, wherein the binding agent is an antibody, a fragment of an antibody, a peptidomimetic comprising an antigen binding epitope or a mini-antibody.

43. (Withdrawn) The method according to claim 39, wherein the detection is an immuno-cytochemical detection procedure.

44. (Currently Amended) The method according to claim 34, wherein ~~at least one of steps (a) and~~ step (b) comprises using at least one nucleic acid probe, that hybridizes under stringent conditions to SEQ ID NO: 1.

45. (Previously Presented) The method according to claim 44, wherein the probe is detectably labeled.

46. (Previously Presented) The method according to claim 45, wherein the label is selected from the group consisting of a radioisotope, a bioluminescent compound, a chemiluminescent compound, a fluorescent compound, a metal chelate, and an enzyme.

47. (Currently Amended) The method according to claim 34, wherein ~~at least one of steps (a) and~~ step (d) comprises using a nucleic acid amplification reaction.

48. (Previously Presented) The method according to claim 47, wherein the amplification reaction is selected from the group consisting of PCR, LCR and NASBA.

49. (Currently Amended) The method according to claim 44, wherein ~~at least one of steps (a) and~~ step (b) comprises hybridizing the at least one nucleic acid probe in-situ.

50. (Currently Amended) The method according to claim 34, wherein at least one of steps (d) and (f) ~~(a) and (b)~~ comprises performing in vitro molecular imaging.

51. (Withdrawn) A kit for performing the method of claim 34, which is a research kit or a diagnostic kit.

52. (canceled)

53. (canceled)

54. (Withdrawn) A method for treating disorders characterized by abnormal proliferation of cells based on the administration of a pharmaceutical composition containing a human transketolase like-1 gene or gene product in a pharmaceutical acceptable form.

55. (canceled)

56. (canceled)

57. (Withdrawn) The method according to claim 54, wherein the disorder characterized by abnormal cell proliferation is cancer.

58. (Withdrawn) The method according to claim 56, wherein the cancer is colon cancer, lung cancer, gastric cancer or pancreatic cancer.

59. (canceled)

60. (canceled)

61. (Withdrawn) A method of identifying and obtaining a drug candidate for therapy of tumors of the colon, the lung, the pancreas or the stomach comprising the steps of

a. contacting a TKT-L1 polypeptide as used in the method of the present invention or a cell expressing said polypeptide in the presence of components capable of providing a detectable signal in response to transketolase activity or to altered regulation of cell proliferation, and

b. detecting presence or absence of a signal or increase of the signal generated from transketolase activity or altered regulation of cell proliferation, wherein the absence or decrease of the signal is indicative for a putative drug.

62. (Withdrawn) A pharmaceutical composition for the treatment of tumors of the colon, the lung, the pancreas or the stomach, comprising a compound identifiable by the method according to claim 61, an antithiamine compound, an inhibitor of transketolase enzyme activity, an inhibitor of transketolase like-1 activity, a transketolase like-1 polypeptide or a human transketolase like-1 nucleic acid.

63. (Withdrawn) A method for rational tumor management comprising

a. detecting the presence or absence and or the level of overexpression of transketolase like-1 gene in biological samples

b. building of subgroups according to the presence or absence and/or the levels of transketolase like-1 gene

c. tailoring an adequate therapy according to the subgroups comprising reduction of transketolase like-1 activity in individuals or in cells of individuals.

64. (Withdrawn) The method according to claim 63, wherein the reduction of the activity of transketolase like-1 is achieved by the administration of antithiamine compounds, of pharmaceutical compositions of claim 63, of inhibitors of transketolase enzyme activity, of transketolase like-1 antisense constructs, of ribozymes specific for transketolase like-1 or by

reduced administration of thiamine.

65. (Previously Presented) The method according to claim 34 wherein SEQ ID NO: 1 is said transketolase like-1 gene of which the level of polynucleotides is detected.

66. (Previously Presented) The method according to claim 36 wherein SEQ ID NO: 1 is the transketolase like-1 gene of which the level of polynucleotides is detected.

67. (Previously Presented) The method according to claim 36, wherein the cancer is colon cancer.

68. (Previously Presented) The method according to claim 66, wherein the cancer is colon cancer.

69. (New) The method according to claim 34, wherein said transketolase-like1 gene is as given in SEQ ID No.1 and SEQ ID No. 2.

70. (New) The method according to claim 34, wherein said transketolase-like1 gene is as given in NCIB Accession No. X 91817.